



Space and modernity: 50 years on

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50 Years of Space: Space and Modernity

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Introduction

In March 2007, European capitals celebrated the commemoration of two 50th anniversaries of the historically remarkable events. First was the 50th year of the launch of Sputnik in Paris, and the other was the 50th anniversary of signing Treaty of Rome, establishing European Economic Community in Rome. These two occasions remind us the excitements, dreams and expectations for the better future and progress, as well as the shock and astonishment in 1957.

It was indeed the idea of "progress" which was highly appreciated and valued 50 years ago. There was a widely accepted notion that the new technology such as space flight would open a new horizon of the human nature, and the progress of technology would make our dream come true. Such a notion produced numerous science fiction novels and cartoon magazines about space trip and the conquest of the universe. And of course, it was the dominating driving force behind the space race between the United States and Soviet Union, alongside with the Cold War rivalry. No matter what the political end of the human space flight was, the society in general supported manned space flight programmes because people found that the space technology would create a new opportunity for human being to progress to higher level.

The idea of European integration was also representing the hope and optimism toward the future. For centuries, Europe has experienced war after war, killing after killing. The concept of sovereignty was to blame of the warfare and the conflict among European states, and therefore, the revolutionary idea of sharing sovereignty was set up as the perpetual peace. Furthermore, the signing of the Treaty of Rome was considered the triumph of human willingness because the process of European integration was halted in 1954 when French Assemblée Nationale rejected the Treaty for establishing European Defence Community. European statesmen have not given up the enthusiasm for European Integration, and persisted to realize it. The Treaty of Rome, therefore, was a symbol of new type of governance and decision-making, which would open the gate to the eternal peace for human beings.

Then, 50 years later of those historical events, we may ask ourselves whether where we are standing today. Have we progressed as it was expected 50 years ago? Are we proud to say that the dream of 1957 came true? On the positive side, we can be proud of what we have achieved. At least, there were 12 men set their feet on the surface of the Moon and numerous people spent a portion of their lives outside the atmosphere of the Earth. There was no war among European

countries and significant level of peace and prosperity was delivered to Europe. We are much better off materially and technologically than it was in 1957.

However, we can also say that we no longer share the same enthusiasm. European integration became a fact of life, and people are complaining and blaming European Union as the source of market competition, increase of unemployment and hardship of their lives. The enlargement, which was considered as a progress of enhancing peace, was contested because of "Polish plumber" in the Western Europe and "imposed reforms" in the Eastern Europe. Accession of Turkey, again a progress for integrating Christian and Islamic culture in one political community, was questioned by many politicians. Not to mention the rejection of the Treaty of European Constitution by French and Dutch referendum.... It is difficult to find the enthusiasm towards the progress of European Integration and establishing new political order.

The same can be said to the space development. The earlier enthusiasm for space flight faded away when Apollo programme was terminated due to the difficulties of finance and public support. The Space Shuttle programme found that safe reusable human flight technology was difficult to establish, and the everlasting financial problems and schedule delays of International Space Station disappointed those who eagerly supported. Even the Vision for Space Exploration, going back to the Moon, building Moon base and manned flight to Mars, is not supported as much as it was during the Apollo period.

Social Value of "Progress"

Does this mean that we don't believe in "progress" anymore? Are we no longer excited for the new and unknown technology which might change the ways of our lives? Yes, I would say, to some extent. We still believe in the idea of "progress" and new technology which would change our lives, but not in the way in which they did in 1957. The social value of "progress" and technology has changed in a large extent during these 50 years.

Let's look at the social value of "progress". The concept of "progress" was directly translated into an increase of production, emancipation from household chores, curing diseases, quick-fix meal and faster and more comfortable travels in 1957. The human endeavour would change the fate of mankind, and we can conquer the difficulties which were imposed by the Mother Nature by developing technology. Space technology was considered as the harbinger of those technologies which change our lives in a good way. In short, technology was an expression of the willingness of mankind to challenge the difficulties, and it will make us to do anything we want, including living in another planet.

The idea of "progress" has not changed much today, but we also see the negative side of "progress". For example, the global warming and environmental disaster was a consequence of the "progress". Fast food and ready-to-eat meal are convenient but not always healthy. Mass

production reduces the price and increases the purchasing power, but it generates a lot of waste which might harm environment permanently.

In this context, new technology is expected to solve these problems, instead of helping industry to produce more and consumers to waste more. New technologies in 1957 – space, nuclear, jet engine aircraft, petrochemical, robotics and computer electronics – were considered as "dream technologies" which would make our lives completely different. They would help massive production, endless power generation, cheap and sophisticated products, and easier and comfortable lives. Indeed, the increased production capability and easier access to consumer goods were the consequence of these technologies.

However, we now know that these "dreams" have some prices to pay. Pursuit of material well-being created a hazardous condition for living and serious damage to the environment. Many industrialised countries became less and less tolerant for the technologies which would bring benefit for human beings but damage environment and nature. The "dream" of today is not a life with convenience and material wealth, but a life with sustainable environment, healthy and safe products, and certain quality.

We are in High Modernity

In short, we have experienced a significant change of our standard of values and the concept of "progress" and "dream". This was largely caused by the transformation of the modernity to high-modernity¹, where capitalist production system was dialectically altered the way of interacting economy and society, and the transformation of "fordism" to "post-fordism"² where production system and state regulation has changed from mass-production/mass-consumption system to more flexible and diversified production. These two school of thoughts indicate that the modern capitalist/market economy and state system has transformed in the latter half of 20th century, particularly in 1970s, due to the oil shocks, end of Bretton Woods system (Dollar-gold standard), end of Vietnam War and detente (easing Cold War tension).

This was exactly the same time when the support for the Apollo programme was declined and the space became less prioritised in the global political affairs. Although space continued to be regarded as the symbol of national power and technological superiority, the public became less enthusiastic to demonstrate their national prestige through space. Instead, large number of people began to question about the justification of spending on the space programmes and its return to the

¹ The distinction between "modernity" and "high-modernity" is made by Anthony Giddens. See, Anthony Giddens, *Consequences of Modernity*, Polity Press, 1990.

² The concepts of "fordism" and "post-fordism" are developed by economic theorists in the Regulation school, such as Robert Boyer and Alain Lipietz. See, for example, Yves Saillard and Robert Boyer (eds.) *Regulation Theory: The State of the Art*, Routledge, 2001 and Alain Lipietz, *Towards a New Economic Order: Postfordism, Ecology and Democracy*, Oxford University Press, 1992.

society. In short, it is no longer justifiable to claim that the space is a technology to open up a new future for mankind and to deliver the "dream" to people.

What Does It Mean for Space?

What does it mean for space today? Are we no longer interested in space? Do space activities lose its function as the symbol of statecraft and glory of technological advancement? To some extent, yes. Space activities can no longer be sustainable if we depend only on the national prestige and praise of "progress". However, some countries, such as China, South Korea and many developing countries, still holds the notion of "progress" and national prestige such as many industrialised countries did in 1957. So-called the "late comers" initiate their space programmes as many of us did during 1950s and 60s.

But for "old comers", space activities need more justification than "progress" and national prestige. Space needs to serve for the society and its values. The social value of space is that it would solve the dire problems of the society and help providing infrastructure for the solutions. Thus, environment monitoring, disaster management, navigation support, long distance communication, and enhancing security capability became prioritised objectives for space activities. The "progress" is not just the progress of technology but a progress of humanity. In other words, space is no longer an end in itself, but a tool to achieve social objectives.

This is indeed the space activities of 21st century. During the 20th century, we invested in space technology because it was an infant stage and it needed to be boosted by enthusiasm. The dream and vision helped people to support significant amount of investment. However, the 21st century space activity must be quite different from what it used to be, and must align with the new social values.

We must also be aware that social values of 21st century are not just environment and humanity, but also include efficiency of investment, or in other words "value for money". In a today's world, space finance became quite different from that of 1957. Private actors are beginning to invest in space, and wealthy individuals are paying their tickets to go to space, while national governments face severe constraints for their spending policy. On the one hand, the globalisation of financial market and neo-liberal market oriented policies forced governments to play with their budget in a very narrow choice of policy. But on the other hand, it is no longer necessary for a person with a dream of going to space to be a "national" astronaut, but to be a millionaire. Also, private actors are investing in the satellite system through Public-Private Partnership (PPP) scheme in Europe, and in the transportation system through Commercial Orbital Transportation System (COTS) framework in the United States. The role of state and national space agency is changing towards the adaptation to this new social value of the efficiency of investment. It is not the state which looks after the people's dream but the market and private capital do. Investment in space,

therefore, needs to be more responsive for the social needs because it needs to return benefits to taxpayers. Today, not all taxpayer appreciate the "progress" and "dream" of space flight, but almost all taxpayer benefits from better environment and safe navigation.

Thus, it is imperative of all people involved in space to recognise and understand that the name of the game in space has changed. Space activities needs to adjust to the values of 21st century, including the "value for money". Those who are enthusiastic to go into space and believing in the "progress" shall not depend on the state-sponsored space activity. After all, many new technologies and "progress" of mankind were realised through the interaction in the market, and space is becoming one of them.

Conclusion

We are still in the modern times. We are no longer in pursuit of "progress" and "dream" for high-tech, science fiction life, but we still use space technology to solve problems on the Earth and improve our quality of life within limited financial resources. It is a different modernity we are living in, compared to the modernity in 1957. Nevertheless, we shall not forget that this new modernity (or high modernity) was only possible with those who contributed to the development of the "dream" technology into reality. Without these achievements, we are not able to appreciate quality of life and importance of environment today. Thus, we celebrate our 50th anniversary of the launch of Sputnik which made us possible to use space for the better human life.